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Cont.

46. The method of claim 45, wherein said therapeutic composition is administered to treat ectopic bone formation or osteoporosis.

REMARKS

Applicants have amended the claims to correct the multiple dependencies of the as-filed claims. Accordingly, this Preliminary Amendment does not introduce new subject matter as support is found in the application filed. Applicants kindly request entry of amended claim set, claims 1-46.

No fees are believed to be due in connection with this correspondence. If there are any payments due or credits owed, please make them to our Deposit Account No. 08-0219.

The Examiner is encouraged to telephone the undersigned at the number listed below in order to expedite the prosecution of this application.

Respectfully submitted,
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Dated: January 29, 2002

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**MARKED-UP VERSION OF AMENDED CLAIMS
UNDER 37 C.F.R. § 1.121(b)(1)**

Please amend claims 10, 14-15, 25, 29, and 32 as described below. Please add new claims 39-46 as described below. As required by 37 C.F. R. § 1.121(b)(1), only the amended claims are rewritten with the amended claim language included. A marked-up version of the amended claims is attached to show the changes relative to the as-filed version.

10. A biologically functional expression vector comprising the nucleic acid molecule of claim 3 ~~or 4~~, and wherein said nucleic acid molecule encodes a polypeptide that stimulates bone cell differentiation.

14. A method for producing a substantially pure osteoactivin protein, or polypeptide fragment thereof, comprising:

- (a) culturing a cell stably transformed with the nucleic acid molecule of claim 1, ~~2, or 5~~ encoding an osteoactivin protein; and
- (b) isolating and purifying said osteoactivin protein from said culture medium.

15. A method for producing a substantially pure osteoactivin protein, or polypeptide fragment thereof, comprising:

- (a) culturing a cell stably transformed with the nucleic acid molecule of claim 3 ~~or 4~~ encoding an osteoactivin protein; and
- (b) isolating and purifying said osteoactivin protein from said culture medium.

25. A therapeutic composition comprising the antibody of claim 11 ~~or 12~~.

29. The method of claim 27, wherein said mammal is human and wherein said human is administered the therapeutic composition of claim 20 ~~or~~ 22.

32. A method for inhibiting bone formation in a mammal, comprising administering to said mammal a therapeutically effective amount of the therapeutic composition of claim 25 ~~or~~ 26.

39. A biologically functional expression vector comprising the nucleic acid molecule of claim 4, and wherein said nucleic acid molecule encodes a polypeptide that stimulates bone cell differentiation.

40. A method for producing a substantially pure osteoactivin protein, or polypeptide fragment thereof, comprising:

(a) culturing a cell stably transformed with the nucleic acid molecule of claim 2 encoding an osteoactivin protein; and

(b) isolating and purifying said osteoactivin protein from said culture medium.

41. A method for producing a substantially pure osteoactivin protein, or polypeptide fragment thereof, comprising:

(a) culturing a cell stably transformed with the nucleic acid molecule of claim 5 encoding an osteoactivin protein; and

(b) isolating and purifying said osteoactivin protein from said culture medium.

42. A method for producing a substantially pure osteoactivin protein, or polypeptide fragment thereof, comprising:

(a) culturing a cell stably transformed with the nucleic acid molecule of claim 4 encoding an osteoactivin protein; and

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(b) isolating and purifying said osteoactivin protein from said culture medium.

43. A therapeutic composition comprising the antibody of claim 12.

44. The method of claim 27, wherein said mammal is human and wherein said human is administered the therapeutic composition of claim 22.

45. A method for inhibiting bone formation in a mammal, comprising administering to said mammal a therapeutically effective amount of the therapeutic composition of claim 26.

46. The method of claim 45, wherein said therapeutic composition is administered to treat ectopic bone formation or osteoporosis.